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1600

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/823,119B

DATE: 11/21/2002

TIME: 11:48:44

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Output Set: N:\CRF4\11212002\I823119B.raw

#13/ R0740  
Seq  
Listing

3 <110> APPLICANT: Kaplow, June  
 4 Haws, Thomas  
 5 Rosier, Marie  
 6 Deneffe, Patrice  
 8 <120> TITLE OF INVENTION: NUCLEAR FACTOR KB INDUCING FACTOR  
 10 <130> FILE REFERENCE: 23461 usa  
 C--> 12 <140> CURRENT APPLICATION NUMBER: US/09/823,119B  
 C--> 13 <141> CURRENT FILING DATE: 2001-03-30  
 15 <160> NUMBER OF SEQ ID NOS: 10  
 17 <170> SOFTWARE: PatentIn Ver. 2.0  
 19 <210> SEQ ID NO: 1  
 20 <211> LENGTH: 453  
 21 <212> TYPE: PRT  
 22 <213> ORGANISM: Homo sapiens  
 24 <400> SEQUENCE: 1  
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 26 1 5 10 15  
 28 Cys Arg Ser Gly Leu Gly Leu Pro Val Ala Pro Ala Gly Gly Arg Asn  
 29 20 25 30  
 31 Pro Pro Pro Ala Ile Gly Gln Phe Trp His Val Thr Asp Leu His Leu  
 32 35 40 45  
 34 Asp Pro Thr Tyr His Ile Thr Asp Asp His Thr Lys Val Cys Ala Ser  
 35 50 55 60  
 37 Ser Lys Gly Ala Asn Ala Ser Asn Pro Gly Pro Phe Gly Asp Val Leu  
 38 65 70 75 80  
 40 Cys Asp Ser Pro Tyr Gln Leu Ile Leu Ser Ala Phe Asp Phe Ile Lys  
 41 85 90 95  
 43 Asn Ser Gly Gln Glu Ala Ser Phe Met Ile Trp Thr Gly Asp Ser Pro  
 44 100 105 110  
 46 Pro His Val Pro Val Pro Glu Leu Ser Thr Asp Thr Val Ile Asn Val  
 47 115 120 125  
 49 Ile Thr Asn Met Thr Thr Thr Ile Gln Ser Leu Phe Pro Asn Leu Gln  
 50 130 135 140  
 52 Val Phe Pro Ala Leu Gly Asn His Asp Tyr Trp Pro Gln Asp Gln Leu  
 53 145 150 155 160  
 55 Ser Val Val Thr Ser Lys Val Tyr Asn Ala Val Ala Asn Leu Trp Lys  
 56 165 170 175  
 58 Pro Trp Leu Asp Glu Glu Ala Ile Ser Thr Leu Arg Lys Gly Gly Phe  
 59 180 185 190  
 61 Tyr Ser Gln Lys Val Thr Thr Asn Pro Asn Leu Arg Ile Ile Ser Leu  
 62 195 200 205  
 64 Asn Thr Asn Leu Tyr Tyr Gly Pro Asn Ile Met Thr Leu Asn Lys Thr  
 65 210 215 220

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67 Asp Pro Ala Asn Gln Phe Glu Trp Leu Glu Ser Thr Leu Asn Asn Ser
68 225                230                235                240
70 Gln Gln Asn Lys Glu Lys Val Tyr Ile Ile Ala His Val Pro Val Gly
71                245                250                255
73 Tyr Leu Pro Ser Ser Gln Asn Ile Thr Ala Met Arg Glu Tyr Tyr Asn
74                260                265                270
76 Glu Lys Leu Ile Asp Ile Phe Gln Lys Tyr Ser Asp Val Ile Ala Gly
77                275                280                285
79 Gln Phe Tyr Gly His Thr His Arg Asp Ser Ile Met Val Leu Ser Asp
80                290                295                300
82 Lys Lys Gly Ser Pro Val Asn Ser Leu Phe Val Ala Pro Ala Val Thr
83 305                310                315                320
85 Pro Val Lys Ser Val Leu Glu Lys Gln Thr Asn Asn Pro Gly Ile Arg
86                325                330                335
88 Leu Phe Gln Tyr Asp Pro Arg Asp Tyr Lys Leu Leu Asp Met Leu Gln
89                340                345                350
91 Tyr Tyr Leu Asn Leu Thr Glu Ala Asn Leu Lys Gly Glu Ser Ile Trp
92                355                360                365
94 Lys Leu Glu Tyr Ile Leu Thr Gln Thr Tyr Asp Ile Glu Asp Leu Gln
95                370                375                380
97 Pro Glu Ser Leu Tyr Gly Leu Ala Lys Gln Phe Thr Ile Leu Asp Ser
98 385                390                395                400
100 Lys Gln Phe Ile Lys Tyr Tyr Asn Tyr Phe Phe Val Ser Tyr Asp Ser
101                405                410                415
103 Ser Val Thr Cys Asp Lys Thr Cys Lys Ala Phe Gln Ile Cys Ala Ile
104                420                425                430
106 Met Asn Leu Asp Asn Ile Ser Tyr Ala Asp Cys Leu Lys Gln Leu Tyr
107                435                440                445
109 Ile Lys His Asn Tyr
110                450
113 <210> SEQ ID NO: 2
114 <211> LENGTH: 364
115 <212> TYPE: PRT
116 <213> ORGANISM: Homo sapiens
118 <400> SEQUENCE: 2
119 Met Ala Leu Val Arg Ala Leu Val Cys Cys Leu Leu Thr Ala Trp His
120 1                5                10                15
122 Cys Arg Ser Gly Leu Gly Leu Pro Val Ala Pro Ala Gly Gly Arg Asn
123                20                25                30
125 Pro Pro Pro Ala Ile Gly Gln Phe Trp His Val Thr Asp Leu His Leu
126                35                40                45
128 Asp Pro Thr Tyr His Ile Thr Asp Asp His Thr Lys Val Cys Ala Ser
129 50                55                60
131 Ser Lys Gly Ala Asn Ala Ser Asn Pro Gly Pro Phe Gly Asp Val Leu
132 65                70                75                80
134 Cys Asp Ser Pro Tyr Gln Leu Ile Leu Ser Ala Phe Asp Phe Ile Lys
135                85                90                95
137 Asn Ser Gly Gln Glu Ala Ser Phe Met Ile Trp Thr Gly Asp Ser Pro
138                100                105                110

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140 Pro His Val Pro Val Pro Glu Leu Ser Thr Asp Thr Val Ile Asn Val
141          115          120          125
143 Ile Thr Asn Met Thr Thr Thr Ile Gln Ser Leu Phe Pro Asn Leu Gln
144          130          135          140
146 Val Phe Pro Ala Leu Gly Asn His Asp Tyr Trp Pro Gln Val Tyr Ile
147 145          150          155          160
149 Ile Ala His Val Pro Val Gly Tyr Leu Pro Ser Ser Gln Asn Ile Thr
150          165          170          175
152 Ala Met Arg Glu Tyr Tyr Asn Glu Lys Leu Ile Asp Ile Phe Gln Lys
153          180          185          190
155 Tyr Ser Asp Val Ile Ala Gly Gln Phe Tyr Gly His Thr His Arg Asp
156          195          200          205
158 Ser Ile Met Val Leu Ser Asp Lys Lys Gly Ser Pro Val Asn Ser Leu
159          210          215          220
161 Phe Val Ala Pro Ala Val Thr Pro Val Lys Ser Val Leu Glu Lys Gln
162 225          230          235          240
164 Thr Asn Asn Pro Gly Ile Arg Leu Phe Gln Tyr Asp Pro Arg Asp Tyr
165          245          250          255
167 Lys Leu Leu Asp Met Leu Gln Tyr Tyr Leu Asn Leu Thr Glu Ala Asn
168          260          265          270
170 Leu Lys Gly Glu Ser Ile Trp Lys Leu Glu Tyr Ile Leu Thr Gln Thr
171          275          280          285
173 Tyr Asp Ile Glu Asp Leu Gln Pro Glu Ser Leu Tyr Gly Leu Ala Lys
174          290          295          300
176 Gln Phe Thr Ile Leu Asp Ser Lys Gln Phe Ile Lys Tyr Tyr Asn Tyr
177 305          310          315          320
179 Phe Phe Val Ser Tyr Asp Ser Ser Val Thr Cys Asp Lys Thr Cys Lys
180          325          330          335
182 Ala Phe Gln Ile Cys Ala Ile Met Asn Leu Asp Asn Ile Ser Tyr Ala
183          340          345          350
185 Asp Cys Leu Lys Gln Leu Tyr Ile Lys His Asn Tyr
186          355          360

```

189 &lt;210&gt; SEQ ID NO: 3

190 &lt;211&gt; LENGTH: 1362

191 &lt;212&gt; TYPE: DNA

192 &lt;213&gt; ORGANISM: Homo sapiens

194 &lt;400&gt; SEQUENCE: 3

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195 atggcgctgg tgcgcgcact cgtctgctgc ctgctgactg cctggcactg ccgctccggc 60
196 ctcgggctgc ccgtggcgcc cgcaggcgcc aggaatcctc ctccggcgat aggacagttt 120
197 tggcatgtga ctgacttaca cttagaccct acttaccaca tcacagatga ccacacaaaa 180
198 gtgtgtgctt catctaaagg tgcaaatgcc tccaaccctg gcccttttgg agatgttctg 240
199 tgtgattctc catatcaact tattttgtca gcatttgatt ttattaaaaa ttctggacaa 300
200 gaagcatctt tcatgatatg gacaggggat agcccacctc atgttcctgt acctgaactc 360
201 tcaacagaca ctgttataaa tgtgatcact aatatgacaa ccaccatcca gagtctcttt 420
202 ccaaattctcc aggttttccc tgcgctgggt aatcatgact attggccaca ggatcaactg 480
203 tctgtagtca ccagtaaagt gtacaatgca gtagcaaacc tctggaaacc atggctagat 540
204 gaagaagcta ttagtacttt aaggaaaggt ggtttttatt cacagaaagt tacaactaat 600
205 ccaaacctta ggatcatcag tctaaacaca aacttgtagt acggcccaaa tataatgaca 660
206 ctgaacaaga ctgacccagc caaccagttt gaatggctag aaagtacatt gaacaactct 720

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207 cagcagaata aggagaaggt gtatatcata gcacatgttc cagtggggta tctgccatct 780
208 tcacagaaca tcacagcaat gagagaatac tataatgaga aattgataga tatttttcaa 840
209 aaatacagtg atgtcattgc aggacaattt tatggacaca ctcacagaga cagcattatg 900
210 gttcttttcag ataaaaaagg aagtccagta aattctttgt ttgtggctcc tgctgttaca 960
211 ccagtgaaga gtgtttttaga aaaacagacc aacaatcctg gtatcagact gtttcagtat 1020
212 gatcctcgtg attataaatt attggatatg ttgcagtatt acttgaatct gacagaggcg 1080
213 aatctaaagg gagagtccat ctggaagctg gagtatatcc tgacccagac ctacgacatt 1140
214 gaagatttgc agccggaaag tttatatgga ttagctaaac aatttacaat cctagacagt 1200
215 aagcagttta taaaatacta caattacttc tttgtgagtt atgacagcag tgtaacatgt 1260
216 gataagacat gtaaggcctt tcagatttgt gcaattatga atcttgataa tatttcctat 1320
217 gcagattgcc tcaaacagct ttatataaag cacaattact ag 1362

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219 &lt;210&gt; SEQ ID NO: 4

220 &lt;211&gt; LENGTH: 1095

221 &lt;212&gt; TYPE: DNA

222 &lt;213&gt; ORGANISM: Homo sapiens

224 &lt;400&gt; SEQUENCE: 4

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225 atggcgctgg tgcgcgcaact cgtctgctgc ctgctgactg cctggcactg ccgctccggc 60
226 ctcgggctgc ccgtggcgcc cgcaggcggc aggaatcctc ctccggcgat aggacagttt 120
227 tggcatgtga ctgacttaca cttagaccct acttaccaca tcacagatga ccacacaaaa 180
228 gtgtgtgctt catctaaagg tgcaaatgcc tccaaccctg gcccttttgg agatgttctg 240
229 tgtgattctc catatcaact tattttgtca gcatttgatt ttattaaaaa ttctggacaa 300
230 gaagcatctt tcatgatatg gacaggggat agcccacctc atgttcctgt acctgaactc 360
231 tcaacagaca ctgttataaa tgtgatcact aatatgacaa ccaccatcca gagtctcttt 420
232 ccaaattctc aggtttttccc tgcgctgggt aatcatgact attggccaca ggtgtatatc 480
233 atagcacatg ttccagtggtg gtatctgcca tcttcacaga acatcacagc aatgagagaa 540
234 tactataatg agaaattgat agatattttt caaaagtaca gtgatgtcat tgcaggacaa 600
235 ttttatggac acactcacag agacagcatt atggttcttt cagataaaaa aggaagtcca 660
236 gtaaattctt tgtttgtggc tcctgctggt acaccagtga agagtgtttt agaaaaacag 720
237 accaacaatc ctggtatcag actgtttcag tatgatcctc gtgattataa attattggat 780
238 atgttgcagt attacttgaa tctgacagag gcgaatctaa agggagagtc catctggaag 840
239 ctggagtata tcctgaccca gacctacgac attgaagatt tgcagccgga aagtttatat 900
240 ggattagcta aacaatttac aatcctagac agtaagcagt ttataaaata ctacaattac 960
241 ttctttgtga gttatgacag cagtgtgaca tgtgataaga catgtaaggc ctttcagatt 1020
242 tgtgcaatta tgaatcttga taatatttcc tatgcagatt gcctcaaaca gctttatata 1080
243 aagcacaatt actag 1095

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245 &lt;210&gt; SEQ ID NO: 5

246 &lt;211&gt; LENGTH: 15

247 &lt;212&gt; TYPE: PRT

248 &lt;213&gt; ORGANISM: Homo sapiens

250 &lt;400&gt; SEQUENCE: 5

251 Ser Lys Gly Ala Asn Ala Ser Asn Pro Gly Pro Phe Gly Asp Val

252 1 5 10 15

255 &lt;210&gt; SEQ ID NO: 6

256 &lt;211&gt; LENGTH: 27

257 &lt;212&gt; TYPE: DNA

258 &lt;213&gt; ORGANISM: Artificial Sequence

260 &lt;220&gt; FEATURE:

261 &lt;223&gt; OTHER INFORMATION: Description of Artificial Sequence:Based on

262 NFIF-14b and NFIF-7a but with Kozak sequence 5' to

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263      ATG
265 <400> SEQUENCE: 6
266 tccaccatgg cgctggtgcg cgcactc                27
268 <210> SEQ ID NO: 7
269 <211> LENGTH: 33
270 <212> TYPE: DNA
271 <213> ORGANISM: Artificial Sequence
273 <220> FEATURE:
274 <223> OTHER INFORMATION: Description of Artificial Sequence: Based on
275      NFIF-14b and NFIF-7a but with an EcoRV site added
276      onto the end
278 <400> SEQUENCE: 7
279 gtcgaaatat atttcgtggt aatgctatag gtc          33
281 <210> SEQ ID NO: 8
282 <211> LENGTH: 28
283 <212> TYPE: DNA
284 <213> ORGANISM: Artificial Sequence
286 <220> FEATURE:
287 <223> OTHER INFORMATION: Description of Artificial Sequence: Based on
288      NFIF-14b and NFIF-7a but with Kozak sequence 5' to
289      ATG
291 <400> SEQUENCE: 8
292 gctccaccat gatattggaca ggggatag                28
294 <210> SEQ ID NO: 9
295 <211> LENGTH: 27
296 <212> TYPE: DNA
297 <213> ORGANISM: Artificial Sequence
299 <220> FEATURE:
300 <223> OTHER INFORMATION: Description of Artificial Sequence: Based on
301      NFIF-14b and NFIF-7a but with an EcoRV site added
302      onto the end
304 <400> SEQUENCE: 9
305 gccactgtgc tggatatcgt aattaac                27
307 <210> SEQ ID NO: 10
308 <211> LENGTH: 30
309 <212> TYPE: DNA
310 <213> ORGANISM: Artificial Sequence
312 <220> FEATURE:
313 <223> OTHER INFORMATION: Description of Artificial Sequence: Based on
314      NFIF-14b and NFIF-7a but with Kozak sequence 5' to
315      ATG
317 <400> SEQUENCE: 10
318 gctccaccat gacaaccacc atccagagtc            30

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**RAW SEQUENCE LISTING ERROR SUMMARY**  
**PATENT APPLICATION: US/09/823,119B**

DATE: 11/21/2002  
 TIME: 11:48:45

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 Output Set: N:\CRF4\11212002\I823119B.raw

**Invalid Line Length:**

The rules require that a line not exceed 72 characters in length. This includes spaces.

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 Seq#:1; Line(s) 24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43  
 Seq#:1; Line(s) 44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63  
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 Seq#:1; Line(s) 84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102  
 Seq#:1; Line(s) 103,104,105,106,107,108,109,110,111,112,113  
 Seq#:2; Line(s) 114,115,116,117,118,119,120,121,122,123,124,125,126,127,128  
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**VERIFICATION SUMMARY**

PATENT APPLICATION: US/09/823,119B

DATE: 11/21/2002

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Input Set : A:\461.app

Output Set: N:\CRF4\11212002\I823119B.raw

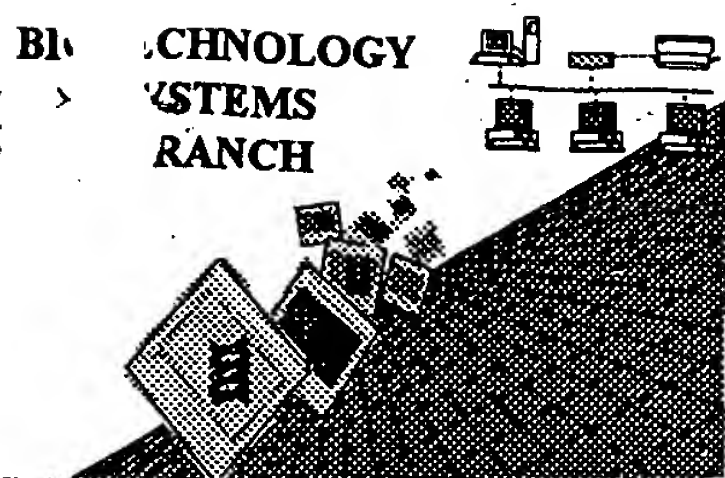
L:12 M:270 C: Current Application Number differs, Replaced Current Application Number

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date



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BIO TECHNOLOGY  
SYSTEMS  
RANCH



#2  
3-27-02

## CRF Problem Report

The Scientific and Technical Information Center (STIC) experienced a problem when processing the following computer readable form (CRF):

Application Serial Number: 09/823,119 A  
Filing Date: 3/30/2001  
Date Processed by STIC: 3/7/2002

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MAR 22 2002  
TECH CENTER 1600/2900

STIC Contact: Mark Spencer, 703-308-4212

### Nature of Problem:

1635

The CRF (was):

- ☒ (circle one) Damaged or Unreadable (for Unreadable, see attached)  
☐ Blank (no files on CRF) (see attached)  
☐ Empty file (filename present, but no bytes in file) (see attached)  
☐ Virus-infected. Virus name: \_\_\_\_\_ The STIC will not process the CRF.  
☐ Not saved in ASCII text  
☐ Sequence Listing was embedded in the file. According to Sequence Rules, submitted file should only be the Sequence Listing.  
☐ Did not contain a Sequence Listing. (see attached sample)  
☐ Other: \_\_\_\_\_

**PLEASE USE THE CHECKER VERSION 3.1 PROGRAM TO REDUCE ERRORS.  
SEE BELOW FOR ADDRESS:**

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/efc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:  
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202  
Or  
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service , or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002